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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,501	08/01/2003	Wilmer Lee Briggs	ORRCP0100US	4393

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EXAMINER
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DOUGLAS, JOHN CHRISTOPHER

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/632,501	BRIGGS, WILMER LEE	
	<b>Examiner</b>	<b>Art Unit</b>	
	John C. Douglas	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/15/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US 4383915). Johnson discloses a process for removing contaminants from waste oil comprising contacting the waste oil with a clay at a temperature of between 343 and 385 degrees C whereby at least a portion of the contaminants may be separated with the clay from the oil and obtaining a filtrate reduced in contaminant content (see Johnson, column 2, lines 47-57).
3. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Johnson. Johnson discloses everything in claim 1 (see paragraph 2) and also discloses where the clay is Fullers Earth (see Johnson, column 8, lines 65-68).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 2, 3, 6-8, 10, 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan (US 4234388).

7. With regard to claims 2, 3, and 6-8, Johnson discloses everything in claim 1 (see paragraph 2), but does not disclose where the hydrocarbon-containing material is obtained from thermal decomposition of a plurality of thermoplastic polymeric materials and animal offal or plant residuals and where the source-derived contaminant is an organic chloride compound.

However, Mallan discloses pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride, animal wastes, and crop wastes and hydrogen chloride as a contaminant (see Mallan, column 1, lines 13-16, column 2, lines 28-33 and 54-63, and column 4, line 59 – column 5, line 5).

Mallan discloses that wastes such as plastics and animal wastes can be recycled back in to the economy by pyrolysis of the wastes and that the pyrolysis produces a hydrogen chloride contaminant which must be removed (see Mallan, column 1, lines 17-35 and column 2, lines 28-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include a hydrocarbon-containing material of pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride, animal wastes, and crop wastes and a contaminant of hydrogen chloride in order to recover pyrolytic oil and remove chloride contaminants.

8. With regard to claim 10, Johnson discloses a process for removing contaminants from waste oil comprising contacting the waste oil with a clay whereby at least a portion of the contaminants may be separated with the clay from the oil and obtaining a filtrate reduced in contaminant content (see Johnson, column 2, lines 47-57), but Johnson does not disclose thermally decomposing polymeric material to obtain a first hydrocarbon-containing material comprising one or more polymer-derived contaminant.

However, Mallan discloses pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride and hydrogen chloride derived from the polyvinyl chloride as a contaminant (see Mallan, column 1, lines 13-16, column 2, lines 28-33 and 54-63, and column 4, line 59 – column 5, line 5).

Mallan discloses that wastes such as plastics can be recycled back in to the economy by pyrolysis of the wastes and that the pyrolysis produces a hydrogen chloride contaminant, which must be removed (see Mallan, column 1, lines 17-35 and column 2, lines 28-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include a hydrocarbon-containing material of pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride,

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and a contaminant of hydrogen chloride derived from polyvinyl chloride in order to recover pyrolytic oil and remove chloride contaminants.

9. With regard to claims 15-17, Johnson in view of Mallan discloses everything in claim 10 (see paragraph 8), but Johnson does not disclose thermally decomposing polymeric material at a temperature from about 300 to about 500 degrees C to obtain a first hydrocarbon-containing material comprising one or more polymer-derived contaminant.

However, Mallan discloses pyrolytic oil derived from pyrolysis of plastics including polyvinyl chloride at temperatures between 315 and 1093 degrees C, and hydrogen chloride derived from the polyvinyl chloride as a contaminant (see Mallan, column 1, lines 13-16, column 2, lines 28-33 and 54-63, and column 4, line 59 – column 5, line 5).

Mallan discloses that wastes such as plastics can be recycled back in to the economy by pyrolysis of the wastes and that the pyrolysis produces a hydrogen chloride contaminant, which must be removed (see Mallan, column 1, lines 17-35 and column 2, lines 28-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include pyrolysis of plastics including polyvinyl chloride at temperatures between 315 and 1093 degrees C and a contaminant of hydrogen chloride derived from polyvinyl chloride in order to recover pyrolytic oil and remove chloride contaminants.

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10. With regard to claim 18, Johnson in view of Mallan discloses everything in claim 10 (see paragraph 8), and Johnson also discloses where the filtered oil is subject to further upgrading processes (see Johnson, column 2, lines 33-37).

11. With regard to claims 19-21, Johnson in view of Mallan discloses everything in claim 10 (see paragraph 8), but Johnson does not disclose blending the product with fuel oil to meet a specification for the desired use.

However, Mallan discloses blending treated pyrolytic oil with fuel oil (see Mallan, column 3, lines 51-59).

Mallan discloses that pyrolytic oil can be blended with fuel oil and the fuel oil can serve as a quench fluid (see Mallan, column 2, lines 14-17 and column 3, lines 51-59).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include blending treated pyrolytic oil with fuel oil in order to quench the pyrolytic oil.

12. With regard to claim 22, Johnson in view of Mallan discloses everything in claim 10 (see paragraph 8), and Johnson discloses where the product is used as a lubricant (see Johnson, column 2, lines 33-37).

13. With regard to claims 23 and 24, Johnson in view of Mallan discloses everything in claim 10 (see paragraph 8), but Johnson does not disclose where the thermally decomposed polymeric material yields a combustible material that is combusted as a heat source in the process.

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However, Mallan discloses that the pyrolysis yields an effluent gas that can serve as a hydrocarbon fuel for heating the pyrolysis process (see Mallan, column 5, lines 61-66 and column 6, lines 58-61).

Mallan discloses that the effluent gas, which is used for fuel, has a higher heating value and can contain valuable olefins (see Mallan, column 5, line 67 – column 6, line 6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include that the pyrolysis yields an effluent gas that can serve as a hydrocarbon fuel for heating the pyrolysis process in order to use a fuel with a higher heating value.

14. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan as applied to claim 10 above, and further in view of Ciora (US 6024880). Johnson in view of Mallan disclose everything in claim 10 (see paragraph 8), but do not disclose regenerating the clay material at a temperature from about 400 to about 815 degrees C and contacting the regenerated clay with the contaminant containing hydrocarbon.

However, Ciora discloses regenerating a clay adsorbent at a temperature from 300 to 800 degrees C and contacting the regenerated clay with the contaminant-containing hydrocarbon (see Ciora, column 4, lines 11-14, column 16, lines 5-7, and column 3, lines 63-65).

Ciora discloses that regeneration of the adsorbent eliminates disposal cost and reduces the operating cost (see column 4, lines 11-14).



Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson in view of Mallan to include regenerating a clay adsorbent at a temperature from 300 to 800 degrees C and contacting the regenerated clay with the contaminant containing hydrocarbon in order to eliminate disposal costs and reduce the operating cost.

15. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan and further in view of Ciora. Johnson in view of Mallan and further in view of Ciora disclose everything in claim 13 (see paragraph 12), but do not disclose repeating the process. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to repeat the process because a process is rarely performed only once. In addition, In *In re Dilnot*, 319 F.2d 188 (CCPA 1963) the court held that a continuous operation is obvious over a batch process. A continuous operation is technically a constant repetition of a batch process. Thus, repeating a batch process would be obvious.

16. Claims 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan and Johnson (US 3930988). Johnson discloses a process for removing contaminants from waste oil comprising contacting the waste oil with a clay whereby at least a portion of the contaminants may be separated with the clay from the oil and obtaining a filtrate reduced in contaminant content (see Johnson, column 2, lines 47-57), but Johnson does not disclose thermally decomposing polymeric material to obtain a first hydrocarbon-containing material comprising one or more polymer-derived contaminant and Johnson does not disclose that the treated oil is for

use a lubricant in a motor vehicle. Also, Johnson does not disclose blending the product with fuel oil to meet a specification for the desired use.

However, Mallan discloses blending treated pyrolytic oil with fuel oil (see Mallan, column 3, lines 51-59).

Mallan discloses that pyrolytic oil can be blended with fuel oil and the fuel oil can serve as a quench fluid (see Mallan, column 2, lines 14-17 and column 3, lines 51-59).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include blending treated pyrolytic oil with fuel oil in order to quench the pyrolytic oil.

Also, Mallan discloses pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride and hydrogen chloride derived from the polyvinyl chloride as a contaminant (see Mallan, column 1, lines 13-16, column 2, lines 28-33 and 54-63, and column 4, line 59 – column 5, line 5).

Mallan discloses that wastes such as plastics can be recycled back in to the economy by pyrolysis of the wastes and that the pyrolysis produces a hydrogen chloride contaminant, which must be removed (see Mallan, column 1, lines 17-35 and column 2, lines 28-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include a hydrocarbon-containing material of pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride, and a contaminant of hydrogen chloride derived from polyvinyl chloride in order to recover pyrolytic oil and remove chloride contaminants.

Also, Johnson (US 3930988) discloses waste oil that is treated and reused as motor oil (see Johnson, column 1, lines 40-51).

Johnson teaches that waste oil can be converted to motor oil as an alternative to disposing of the waste oil (see Johnson, column 1, lines 40-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include waste oil that is treated and reused as motor oil in order to avoid disposing of the waste oil.

17. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan and Johnson as applied to claim 25 above, and further in view of Ciora (US 6024880). Johnson in view of Mallan and Johnson disclose everything in claim 25 (see paragraph 16), but do not disclose regenerating the clay material at a temperature from about 400 to about 815 degrees C and contacting the regenerated clay with the contaminant-containing hydrocarbon.

However, Ciora discloses regenerating a clay adsorbent at a temperature from 300 to 800 degrees C and contacting the regenerated clay with the contaminant-containing hydrocarbon (see Ciora, column 4, lines 11-14, column 16, lines 5-7, and column 3, lines 63-65).

Ciora discloses that regeneration of the adsorbent eliminates disposal cost and reduces the operating cost (see column 4, lines 11-14).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson in view of Mallan and Johnson to include regenerating a clay adsorbent at a temperature from 300 to 800

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degrees C and contacting the regenerated clay with the contaminant containing hydrocarbon in order to eliminate disposal costs and reduce the operating cost.

18. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan and Johnson. Johnson in view of Mallan and Johnson disclose everything in claim 25 (see paragraph 16), but do not disclose repeating the process. However, In *In re Dilnot*, 319 F.2d 188 (CCPA 1963) the court held that a continuous operation is obvious over a batch process. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to perform the process as a continuous process.

19. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan. Johnson discloses a process for removing contaminants from waste oil comprising contacting the waste oil with a clay whereby at least a portion of the contaminants may be separated with the clay from the oil and obtaining a filtrate reduced in contaminant content (see Johnson, column 2, lines 47-57), but Johnson does not disclose thermally decomposing polymeric material to obtain a first hydrocarbon-containing material comprising one or more polymer-derived contaminant and Johnson does not disclose that the treated oil is for use a lubricant in a motor vehicle. Also, Johnson does not disclose blending the product with fuel oil to meet a specification for the desired use.

However, Mallan discloses blending treated pyrolytic oil with fuel oil (see Mallan, column 3, lines 51-59).

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Mallan discloses that pyrolytic oil can be blended with fuel oil and the fuel oil can serve as a quench fluid (see Mallan, column 2, lines 14-17 and column 3, lines 51-59).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include blending treated pyrolytic oil with fuel oil in order to quench the pyrolytic oil.

Also, Mallan discloses pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride and hydrogen chloride derived from the polyvinyl chloride as a contaminant (see Mallan, column 1, lines 13-16, column 2, lines 28-33 and 54-63, and column 4, line 59 – column 5, line 5).

Mallan discloses that wastes such as plastics can be recycled back in to the economy by pyrolysis of the wastes and that the pyrolysis produces a hydrogen chloride contaminant, which must be removed (see Mallan, column 1, lines 17-35 and column 2, lines 28-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include a hydrocarbon-containing material of pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride, and a contaminant of hydrogen chloride derived from polyvinyl chloride in order to recover pyrolytic oil and remove chloride contaminants.

20. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan as applied to claim 29 above, and further in view of Ciora (US 6024880). Johnson in view of Mallan disclose everything in claim 29 (see paragraph 19), but do not disclose regenerating the clay material at a temperature from about 400

to about 815 degrees C and contacting the regenerated clay with the contaminant containing hydrocarbon.

However, Ciora discloses regenerating a clay adsorbent at a temperature from 300 to 800 degrees C and contacting the regenerated clay with the contaminant-containing hydrocarbon (see Ciora, column 4, lines 11-14, column 16, lines 5-7, and column 3, lines 63-65).

Ciora discloses that regeneration of the adsorbent eliminates disposal cost and reduces the operating cost (see column 4, lines 11-14).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson in view of Mallan to include regenerating a clay adsorbent at a temperature from 300 to 800 degrees C and contacting the regenerated clay with the contaminant containing hydrocarbon in order to eliminate disposal costs and reduce the operating cost.

21. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan. Johnson in view of Mallan discloses everything in claim 29 (see paragraph 19), but do not disclose repeating the process. However, In *In re Dilnot*, 319 F.2d 188 (CCPA 1963) the court held that a continuous operation is obvious over a batch process. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to perform the process as a continuous process.

22. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan. Johnson discloses a process for removing contaminants from waste oil comprising contacting the waste oil with a clay whereby at least a portion of the

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contaminants may be separated with the clay from the oil and obtaining a filtrate reduced in contaminant content (see Johnson, column 2, lines 47-57), but Johnson does not disclose thermally decomposing polymeric material to obtain a first hydrocarbon-containing material comprising one or more polymer-derived contaminant and Johnson does not disclose that the treated oil is for use a lubricant in a motor vehicle. Also, Johnson does not disclose blending the waste oil with fuel oil to meet a specification for the desired use.

However, Mallan discloses blending treated pyrolytic oil with fuel oil prior to filtration (see Mallan, column 3, lines 51-59 and Figure 2).

Mallan discloses that pyrolytic oil can be blended with fuel oil and the fuel oil can serve as a quench fluid (see Mallan, column 2, lines 14-17 and column 3, lines 51-59 and see *In re Burhans*, 154 F.2d 690 (CCPA 1946), which held that the selection of any order of process steps is *prima facie* obvious).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include blending treated pyrolytic oil with fuel oil in order to quench the pyrolytic oil.

Also, Mallan discloses pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride and hydrogen chloride derived from the polyvinyl chloride as a contaminant (see Mallan, column 1, lines 13-16, column 2, lines 28-33 and 54-63, and column 4, line 59 – column 5, line 5).

Mallan discloses that wastes such as plastics can be recycled back in to the economy by pyrolysis of the wastes and that the pyrolysis produces a hydrogen chloride

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contaminant, which must be removed (see Mallan, column 1, lines 17-35 and column 2, lines 28-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson to include a hydrocarbon-containing material of pyrolytic oil derived from pyrolysis of plastics, polyvinyl chloride, and a contaminant of hydrogen chloride derived from polyvinyl chloride in order to recover pyrolytic oil and remove chloride contaminants.

23. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan as applied to claim 30 above, and further in view of Ciora (US 6024880). Johnson in view of Mallan disclose everything in claim 10 (see paragraph 19), but do not disclose regenerating the clay material at a temperature from about 400 to about 815 degrees C and contacting the regenerated clay with the contaminant containing hydrocarbon.

However, Ciora discloses regenerating a clay adsorbent at a temperature from 300 to 800 degrees C and contacting the regenerated clay with the contaminant-containing hydrocarbon (see Ciora, column 4, lines 11-14, column 16, lines 5-7, and column 3, lines 63-65).

Ciora discloses that regeneration of the adsorbent eliminates disposal cost and reduces the operating cost (see column 4, lines 11-14).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Johnson in view of Mallan to include regenerating a clay adsorbent at a temperature from 300 to 800 degrees C and



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contacting the regenerated clay with the contaminant containing hydrocarbon in order to eliminate disposal costs and reduce the operating cost.

24. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Mallan. Johnson in view of Mallan discloses everything in claim 32 (see paragraph 22), but do not disclose repeating the process. However, In *In re Dilnot*, 319 F.2d 188 (CCPA 1963) the court held that a continuous operation is obvious over a batch process. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to perform the process as a continuous process.

### ***Conclusion***

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Cha (US 4983278); Kalnes (US 5969201); Korff (US 4982027); Haag (US 4300009); Wu (US 5079385); and Dummersdorf (US 5055167).

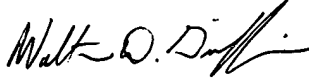
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Douglas whose telephone number is 571-272-1087. The examiner can normally be reached on 7:30 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCD

  
**Walter D. Griffin**  
**Primary Examiner**